Amendments to the Claims:

This listing of claims will replace all prior versions, and listings, of claims in the application:

Listing of Claims:

Claim 1 (currently amended): A sedation and analgesia system, comprising:

at least one patient health monitor device adapted so as to be coupled to a patient and so as to measure a patient parameter reflecting a physiological condition of the patient;

a user interface;

a drug delivery controller supplying one or more drugs to the patient; and

an electronic controller interconnected with the patient health monitor, the user interface, and the drug delivery controller, said electronic controller having a data set reflecting parameters of at least one monitored patient physiological condition, wherein said electronic controller receives said patient parameter and**, throughout operation of the sedation and analgesia system,** continually analyzes trends of said patient parameter in accord with the data set to determine whether adverse patient conditions are imminent and to initiate suitable action.

Claim 2 (original): The sedation and analgesia system of claim 1, further comprising one or more effectors for ensuring patient safety and clinician awareness, wherein said electronic controller is interconnected with the effector and controls the effector in accordance said trends of said patient parameter.

Claim 3 (previously presented): The sedation and analgesia system of claim 1, wherein said electronic controller provides preemptive warnings in response to adverse trends of said patient parameter within a range of said data set.

Claim 4 (original): The sedation and analgesia system of claim 1, wherein said electronic controller evaluates said patient parameter measurements against said trends.

Claim 5 (original): The sedation and analgesia system of claim 1, wherein said patient parameter is one derived from capnometry, pulse oximetry, and blood pressure.

Claim 6 (original): The sedation and analgesia system of claim 1, wherein said patient parameter is heart rate.

Claim 7 (original): The sedation and analgesia system of claim 1, wherein said at least one patient health monitor is one of an electrocardiograph and a pulse oximeter.

Claim 8 (currently amended): A method for incorporating trend analysis into a sedation and analgesia system, comprising the steps of:

providing a patient monitor for a patient to monitor a single patient parameter;

monitoring the patient with the monitor, wherein data collected from the monitor may be transmitted to a controller of the sedation and analgesia system;

creating a trend based on the data received from the monitor;

at least one of inputting the trend into an algorithm of the sedation and analgesia system and**, throughout operation of the sedation and analgesia system,** continually analyzing the trend to determine whether adverse patient conditions are imminent; and

initiating suitable action based on the trend analysis.

Claim 9 (previously presented): The method of claim 8, wherein said step of analyzing includes at least one of calculating the slope of the trend, calculating multiple slopes for trend variation, calculating coefficients of polynomials of the trend, and curve-fitting the slope using a least mean square error technique.

Claim 10 (original): The method of claim 8, further comprising the step of calculating a probability value for whether data presented to the controller is actually indicative of a slope change.

Claim 11 (previously presented): The method of claim 8, wherein the trend is analyzed in combination with trends from related patient parameters.

Claim 12 (original): The method of claim 9, wherein the trend is incorporated as a feature of orthogonal redundancy.

Claim 13 (original): The method of claim 8, wherein the trend is integrated into at least one neural network.

Claim 14 (original): The method of claim 8, wherein the suitable action comprises at least one of continuing to monitor, initiating a pre-alarm, pausing drug delivery, and initiating a full alarm.

Claim 15 (previously presented): The system of claim 2, wherein said effector is one or more of a drug decrease, drug increase, positive airway pressure change, pre-alarm, oxygen delivery, trigger for additional data sampling from monitors, change in drugs, and patient responsiveness query.

Claim 16 (previously presented): The system of claim 1, wherein the suitable action comprises at least one of initiating a pre-alarm, pausing drug delivery, and initiating a full alarm.